THE APPROACH TO AUTOMATIC BUILDING OF FUNCTIONS INTERPRETATION DURING LEARNING ONTOLOGIES

Lytvyn Vasyl Volodymyrovych, Khrushch Solomia Bogdanivna

Information Systems and Networks Department, Institute of Computer Science and Information Technology, Lviv Polytechnic National University, S. Bandery Str., 12, Lviv, 79013, UKRAINE

Research and development in the field of data mining in natural language texts and ontology's machine learning are analyzed. The necessity of automation building features for interpretations of concepts and relations in the ontology is given. The method of selection descriptive logics (DL) predicates from natural text is described. There is shown that this algorithm must be multistage and involve hierarchical multilevel recognition procedure for concepts, relations, predicates and rules are taken to the resulting ontology. English words correspond to some built-in predicates software tool Protégé-OWL are defined.

The text corpus consists of some text documents; each of them contains one to 10-20 sentences. These sentences are in sequential logical connection. The text is divided into an ordered set of sentences. Above these sentences consecutively basic procedure of recognition are executed. Complex sentences are divided to simple sentences by parsing tools. In the process of separation there is performed substitution of pronouns nouns of the first part of the sentence to which these pronouns refer. Preparation of proposals is carried out so as in the future the algorithm can clearly identify all the concepts involved in the allegations contained in the sentences. There are different generalized concepts (classes) and specific concepts (instances of the corresponding classes). After that there is finding the relationships corresponded to built-in predicates DL.

Keywords – ontology, learning ontologies, intelligent system, knowledge base, interpretation, descriptive logic.